

Institutional Report

STANDARDS	PROPOSED CHANGES TO RULES	COMMENTS
Draft 2014		
<u>10.58.515 INDUSTRIAL/TECHNOLOGY EDUCATION</u>	Note: see the "National Standards" file in this folder. 10.58.515 <u>Industrial Trades and Technology Education</u>	
(1) The program requires that successful candidates:	(1) The program requires that successful candidates:	
(a) demonstrate knowledge of a curriculum and curriculum design consistent with current national and Montana standards, including:	(a) demonstrate knowledge of a curriculum and curriculum design consistent with current national and Montana standards, including:	
(i) a mission statement with stated goals and objectives that reflect the intent of industrial/technology education programs, as guided by national professional organizations;	(i) a mission statement with stated goals and objectives that reflect the intent of industrial/technology <u>Industrial Trades and Technology</u> education programs, as guided by <u>the</u> national professional organizations;	
(ii) an organized set of concepts, processes, and systems that are technological in nature; and	(ii) an organized set of concepts, processes, and systems that are technological in nature; and	
(iii) content orientated toward technology education (TE) or industrial technology (IT);	(iii) content orientated toward technology education (TE) or industrial technology (IT); <u>Industrial Trades and Technology;</u>	
(b) demonstrate knowledge of content area(s) in which the candidate teaches, including:	(b) demonstrate knowledge of content area(s) in which the candidate teaches, including: <u>demonstrate knowledge/competency in courses in applied science, technology, engineering, mathematics, and communication.</u>	
(i) fundamental knowledge about the development of technology, its effects on people, the environment, and society;	(i) fundamental knowledge about the development of technology, its effects on people, <u>industry</u> , the environment, and society;	



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	<u>(ii) demonstrate continued growth by assessing growth needs based on research-based instructional practices, knowledge, and dispositions, and plan and carry out needed professional development, especially in relation to local school goals; and</u>	
	<u>(iii) apply a wide range of assessment tools and practices, including technology – based assessment tools;</u> <u>apply a variety of assessment practices to improve student learning and motivation;</u>	
	<u>(iv) apply multiple indicators of learning progress which align instruction and learning and which assess learner attitudes;</u>	
	<u>(v) appropriately apply evidenced-based and innovative assessment approaches;</u>	
	<u>(vi) utilize and monitor teacher and student self-reflection; and</u>	
	<u>(vii) communicate results of assessments to specific individuals (e.g., students, parents, caregivers, colleagues, administrators, policymakers, policy officials, community, etc.)</u>	
(iii) communication technology, which includes information-related technology that uses resources to transfer information and to extend human potential;	iii (viii) communication technology, which includes information-related technology that uses resources to transfer information and to extend human potential;	
(ii) information about industry's organization, personnel systems, techniques, resources, products, and social impacts;	iii (ix) information about industry's organization, personnel systems, techniques, resources, products, and social impacts;	



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(iv) construction technology, which includes physical-related technology that uses resources to build structures or construct work on site;	(iv) <u>(x)</u> construction technology, which includes physical-related technology that uses resources to build structures or construct work on site;	
(v) manufacturing technology, which includes physical-related technology using resources to extract and convert raw/recycled materials into industrial and consumer goods;	(v) <u>(xi)</u> manufacturing technology, which includes physical-related technology using resources to extract and convert raw/recycled materials into industrial and consumer goods;	
(vi) transportation technology, which includes physical-related technology using transportation technologies to maintain contact and exchange among individuals and societal units through the movement of material, goods, and people; and	(vi) <u>(xii)</u> transportation technology, which includes physical-related technology using transportation technologies to maintain contact and exchange among individuals and societal units through the movement of material, goods, and people; and	
(vii) identification of a level and scope of entry level skills in the use of tools, instruments, and machines necessary for successful teaching;	(vii) <u>(xiii)</u> identification of a level and scope of entry level skills in the use of tools, instruments, and machines necessary for successful teaching;	
(c) demonstrate knowledge of quality workmanship;	(c) demonstrate knowledge of quality workmanship <u>and work ethics</u> ;	
(d) develop insight and understanding in the application of technological concepts, processes, and systems;	(d) develop insight and understanding in the application of technological concepts, processes, and systems;	
(e) develop and demonstrate skills in utilizing tools, materials, machines, processes, and technical concepts relative to content organizers, safely and efficiently;	(e) develop and demonstrate skills in utilizing tools, materials, machines, processes, and technical concepts relative to content organizers, safely and efficiently;	



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(f) demonstrate skills, creative abilities, positive self-concepts, and individual potentials relating to technology;	(f) demonstrate skills, creative abilities, positive self-concepts, and individual potentials relating to technology;	
(g) demonstrate problem-solving and decision-making abilities involving human and material resources and technological processes and systems;	(g) demonstrate problem-solving and decision-making abilities involving human and material resources and technological processes and systems;	
(h) demonstrate activity-oriented laboratory instruction that reinforces abstract concepts with concrete experiences;	(h) demonstrate activity-oriented laboratory instruction that reinforces abstract concepts with concrete experiences;	
(i) demonstrate knowledge and skills regarding how technological systems function and the attitudes to evaluate those systems;	(i) demonstrate knowledge and skills regarding how technological systems function and the attitudes to evaluate those systems;	
(j) demonstrate knowledge of past, present, and future technological systems by applying knowledge and skills developed in the study of other systems;	(j) demonstrate knowledge of past, present, and future technological systems by applying knowledge and skills developed in the study of other systems;	
(k) apply and use other content knowledge (e.g., mathematics, science, history) to technology to solve individual and social problems;	(k) apply and use <u>other content knowledge from other disciplines</u> (e.g., mathematics, science, history) to <u>technology</u> solve individual and social problems <u>inclusive of gender equity, and culturally sensitive opportunities.</u>	
(l) introduce career opportunities in industrial/technology and related fields and encourage and advise students about postsecondary options;	(l) introduce <u>and encourage</u> career opportunities in <u>Industrial/Technology-Industrial Trades and Technology Education</u> and <u>related fields and</u> <u>and encourage and advise students about</u> postsecondary options; (second option)	



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	Technology-Industrial Trades and Technology Education and related fields and and encourage and advise students about postsecondary education options;	
	<u>(m) know and understand the rules and regulations dealing with licensure and certifications (i.e.: state teaching, program certifications, and OSHA 10 instructor certification), continuing education, and funding.</u>	
(m) demonstrate knowledge of educational environments in the classroom and laboratory that enhance student learning;	(m) <u>(n) demonstrate knowledge of educational environments in the classroom and laboratory that enhance student learning;</u>	
(n) select and apply appropriate instructional strategies for individual and group instruction;	(n) <u>(o) select and apply appropriate instructional strategies for individual and group instruction;</u>	
(o) demonstrate knowledge of and apply laboratory management skills (e.g., maintaining inventory, filing, requisitioning equipment and materials, maintenance, and budgeting);	(o) <u>(p) demonstrate and apply knowledge of safe laboratory management skills including emphasis on the facilities, personal safety equipment and environmental concerns;</u> (e.g., maintaining inventory, filing, requisitioning equipment and materials, maintenance, and budgeting);	
(p) develop and use lesson plans and organize materials to meet the learning needs of students;	(p) <u>(q) develop and use lesson plans and organize materials to meet the learning needs of students;</u>	
(q) develop and implement classroom management consistent with school policy;	(q) <u>(r) develop and implement classroom management consistent with school policy;</u>	
(r) demonstrate the development of personal and leadership competencies (e.g., citizenship, personal development, goal setting, parliamentary procedure, and teamwork);	(r) <u>(s) demonstrate the development of personal and leadership competencies (e.g., citizenship, personal development, goal setting, parliamentary procedure, and teamwork);</u>	



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	<u>demonstrate and apply ethical professional practice based on principles and philosophy of Industrial Trade and Technology Education and Career Technical Education (CTE) through civic engagement, advocacy, and active participation in professional development and professional growth activities;</u>	
	<u>(t) integrate professional student organizations into the curriculum to provide an environment in which students grow professionally, personally, and socially; involve the business and industry community; and recognize the potential for these organizations to provide personal leadership development.</u>	
	<u>(u) build professional relationships with stakeholders to produce a learning environment that reflects the real world and provide benefits to the student and the community including development of career pathways and work-based learning experiences;</u>	
(s) articulate industrial/technology education to school and community publics;	(s) <u>(v) articulate industrial/technology Industrial Trades and Technology education to school and the local community publics;</u>	
(t) develop and coordinate an external advisory committee for the program;	(t) <u>(w) develop and coordinate an external advisory committee for the program; partnerships, advisory boards, and implement job shadowing into the curriculum</u>	
(u) demonstrate knowledge of how to gain access to services and financial resources available from state and federal agencies and operate within applicable laws and regulations governing education;	(u) <u>(x) demonstrate knowledge of how to gain access to services and financial resources available from state and federal agencies and operate within applicable laws and regulations governing education;</u>	
(v) develop students' abilities to search, access,	(v) <u>(y) develop students' abilities to search, access, retrieve,</u>	



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retrieve, synthesize, and apply information; and	synthesize, and apply information; and	
(w) provide opportunities for students with work-related experience useful for employment entry after graduation.	(w) (z) provide opportunities for students with work-related experience useful for employment entry after graduation.	
(History: 20-2-114, MCA; <u>IMP</u> , 20-2-121, MCA; <u>NEW</u> , 1979 MAR p. 492, Eff. 5/25/79; <u>AMD</u> , 1984 MAR p. 831, Eff. 5/18/84; <u>AMD</u> , 1989 MAR p. 397, Eff. 3/31/89; <u>AMD</u> , 1994 MAR p. 2772, Eff. 10/14/94; <u>AMD</u> , 2000 MAR p. 2406, Eff. 9/8/00; <u>AMD</u> , 2007 MAR p. 190, Eff. 2/9/07.)		



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